DOCUMENT RESUME

ED 119 876 PS 008 495

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TITLE The Effects of Individualized Instruction on the Improvement of Self Concept of Low Achieving Primary Grade Urban Children.
PUB DATE Jul 75
NOTE 103p.; Ph.D. dissertation, Walden University

EDRS PRICE MF-$0.83 HC-$6.01 Plus Postage
DESCRIPTORS Comparative Analysis; Diagnostic Teaching; Educational Objectives; Grade 3; *Individualized Instruction; Individualized Reading; Intervention; *Low Achievers; Measurement Instruments; *Primary Education; Reading Achievement; Remedial Mathematics; *Remedial Reading Programs; *Self Concept; Student Teacher Relationship; Urban Education
IDENTIFIERS Checkpoint Center Program; *Pennsylvania (Philadelphia)

ABSTRACT

This dissertation investigates the effect of an individualized remedial reading and mathematics program (the Philadelphia Checkpoint Center Program) on the self concept of low achieving third-grade children. In the program, children received individualized, diagnostic and prescriptive instruction for 40 minutes daily in groups of 15 or fewer. In an effort to assess the effectiveness of Checkpoint on self concept, and experimental group of 184 third-grade pupils was identified and exposed to the program for 50 days. A control group was composed of children who were identified as low achievers but who did not participate in the program. The Reading Section of Form A of the California Achievement Test was administered prior to the 50-day period and Form B was administered at the end of the study interval to children in both the experimental and control groups. Three independent self concept scales were administered to both groups before and after the treatment period. Two of the self concept measures were self reports while the third, an inferred self concept assessment scale, was completed by classroom teachers. The teacher scale and one self-report form are included in appendices. Results indicated that positive changes in the self concept and in reading achievement of children exposed to the Checkpoint Program during the experimental period were significantly greater on all measures than changes experienced by the control group. (Author/BRT)

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THE EFFECTS OF INDIVIDUALIZED INSTRUCTION ON THE IMPROVEMENT OF SELF CONCEPT OF LOW ACHIEVING PRIMARY GRADE URBAN CHILDREN

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PS 008495

WALDEN UNIVERSITY

July 1975

ABSTRACT

THE EFFECTS OF INDIVIDUALIZED INSTRUCTION ON THE IMPROVEMENT OF SELF CONCEPT OF LOW ACHIEVING PRIMARY GRADE URBAN CHILDREN

The Philadelphia, Pennsylvania School District operates the Checkpoint Center Program which was designed to correct low achievement problems of intellectually normal children in reading. Children were "cycled" out of regular classrooms to receive individualized, diagnostic and prescriptive instruction for 40 minutes daily in groups of 15 or less. This study was designed to discover if measurable change in self concept resulted from exposure to the program.

In an effort to assess the effectiveness of Checkpoint on self concept, an experimental group of 184 third grade pupils was identified and exposed to the program for 50 days. Neither the children in the experimental group nor the children in a control group had previous Checkpoint exposure. The Reading Section of Form A of the California Achievement Test was administered prior to the 50 day period and Form B was administered at the end of the study interval to children in both the experimental and control groups. Three independent self concept scales were administered to both groups before and after the treatment period. Two of the self concept measures were self reports while the

third, an inferred self concept assessment scale, was completed by classroom teachers.

The results indicated that positive changes in the self concept and in the reading achievement of children exposed to the Checkpoint Program during the experimental period were greater on all measures than changes experienced by the control group. When comparing the relative changes in self concept and reading achievement of children in the Checkpoint Program with those of the control group, the differences were statistically significant. It was concluded that an instructional process that is warm and personalized as well as diagnostic and prescriptive can produce gains in both self concept and reading achievement among academically low achieving primary grade urban children.

ACKNOWLEDGMENTS

The writer wishes to express his grateful appreciation to the many teachers, principals and clerks who cooperated during this investigation. He is deeply indebted to Dr. Robert Pitcher, who provided indispensable guidance and assistance throughout the study. The writer is particularly indebted to Dr. Robert J. Bayuk, Jr. for his assistance with the computer processing of the data, and to Anne Forte for her encouragement, patience and typing. The writer is, perhaps, most indebted to the children who participated in this investigation. Hopefully, the findings of the study will be of benefit to them.

E.J.F.

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CHAPTER I

INTRODUCTION

Purpose and Need for Study

In February 1974, the School District of Philadelphia, Pennsylvania launched the Philadelphia Checkpoint Center Program. The program was designed to correct low achievement problems of intellectually normal primary grade urban children in grades one, two and three in reading and, in some cases, mathematics. Centers were located in 100 schools and served approximately 6000 children. Each center provided instruction for approximately 60 boys and girls who were "cycled" out of their regular classrooms to receive assistance in groups averaging 12 pupils for a period of 40 minutes daily. Each Checkpoint Center teacher was assisted by an instructional aide whose presence made possible a pupil-adult ratio of approximately six to one during an instructional period in the center. Instruction was diagnostic and corrective in nature and was concentrated on reading and, to a limited extent, on mathematics through an approach that treated specifically identified skill mastery deficiencies. The critical aspect of the program was that instruction which can be described as personalized or individualized was provided. A great deal of attention was given to stressing the personal con-

tact between the adult staff member and the child.

Prior to the start of the program, administrators were fearful that children and parents would resist assignment to a program resembling a special class setting. However, contrary to what had been anticipated, the general reaction reported throughout the city was one of enthusiastic approval of the program on the part of the children, parents and teachers. Checkpoint teachers reported that children who, heretofore, had developed an "I hate school" attitude now appeared to like school or, at least, the Checkpoint Center period. The children's attitude, and especially self concept, generally seemed to improve.

It must be made extremely clear that unsolicited reports to the Checkpoint Program Office concerning the improved pupil attitudinal change toward school and self between February and June 1974 were based solely upon teacher opinion and not measured in any rigorous way. With respect to what had been anticipated the reports, which were both unexpectedly favorable and puzzling, raised a number of questions. Among the questions were:

1. Was there actually a measurable change in self concept as a result of exposure to the Checkpoint Program?
2. Was the reported improvement in self concept related to the personalized style of instruction used in the Checkpoint Centers?
3. If a change in self concept actually occurred,

what percentage of the youngsters was affected?

4. If a change in self concept actually occurred, did it take place in every center? Was the teacher's style an important variable?
5. Was the style of instruction in general so different in the Checkpoint Center when compared to the regular classroom that the children were merely reacting to the change?
6. Was the reported improved self concept related to the "newness" of the experience and would it fade with continued exposure to the program?
7. Could improved self concept be the result of an educational process that was not primarily designed to improve self concept?
8. Could improved self concept be the result of an educational process and not be based upon increased academic achievement?

The questions raised in issues seven and eight are of considerable importance to teachers and curriculum developers. Numerous studies have found self concept to be significantly related to the academic achievement of students (6), (15), (17), (41), (71), (55:iv), (111). However, Purkey (80:23) wrote:

> "A great deal of caution is needed before one assumes that either the self concept determines scholastic performance or that scholastic performance shapes the self concept. It may be that the relationship between the two is caused by

> some factor yet to be determined. The best evidence now available suggests that it is a two-way street, that there is a continuous interaction between the self and academic achievement, and that each directly influences the other."

Knapp (52:5) listed as an unresolved research issue:

> "Does low self concept result in poor achievement or does poor achievement result in a lowered self concept?"

In another publication, Purkey (82:166) stated that:

> "The available evidence indicates a persistent relationship between self-perceptions and academic achievement. An unexplored aspect of this relationship is the influence of the school atmosphere on pupils' self-perceptions."

As previously indicated, based upon inconclusive, non-quantifiable teacher opinion, there appeared to be an improvement in the self concept among children who were exposed to the instruction provided in the Checkpoint Center Program. If there was a style of instruction which was antecedent to improved self concept and improved academic achievement, the implications for education would be considerable. However, before any conclusions could be drawn that relate improved self concept with the individualized type of Checkpoint Center instruction, the actual fact that improved self concept was induced by the Checkpoint experience must be established. Therefore, this study focused primarily upon question one and attempted to determine if, in fact, measurable change occurred in self concept when children were exposed to the individualized type instruction of the Checkpoint Program.

Checkpoint Center Program

The Philadelphia School District "Checkpoint Center Program" was established to assist the significant number of normal children who moved through the grades of the elementary school and did not appear to fully benefit from the instructional program. These children became part of a vast group of youngsters known as low achievers, i.e., children in the normal range of intelligence with relatively low scholastic achievement. Whether the poor school performance was due to maturational lags, perceptual problems, an interrupted educational program, lack of motivation, or some other problem was not always known. The fact was that there may have been elements in the child's school experience that could have been corrected, and thus the student could have moved through experiences typical for his grade and at a rate relative to his natural ability.

A regular classroom teacher could not always determine the specific learning problems of all youngsters in her class. Even if the teacher could have ascertained what each youngster's specific learning strengths and weaknesses were, then coping with the 30 or more different learning programs became a severe management problem. The Checkpoint Center Program attempted to assist low achieving children by "cycling" youngsters out of their regular classrooms for approximately 40 minutes each day and exposing them to instruction which was individualized, diagnostic and prescriptive.

Characteristic features of the Checkpoint Centers included:

1. The center was housed in the space of a normal size classroom.
2. Each Checkpoint Center room was staffed with a qualified elementary classroom teacher with at least two years experience and a carefully selected instructional aide.
3. The teaching format included determining each child's learning weaknesses and strengths and the development of an individually prescribed instructional strategy.
4. Once a particular instructional strategy was determined, daily lessons were based on the achievement of specific learning objectives.
5. Curricular materials selected for use in the Center were correlated to specific learning objectives and, when possible, related to the learning styles of youngsters. Although most of the materials selected were used successfully in Philadelphia Schools, an effort was made to use newer items which appeared to show promise.
6. Checkpoint Center teachers were exposed to continuous staff development activities both before and while operating centers. The key objective of the staff development

program was to make each Checkpoint Center teacher a competent diagnostic-prescriptive teacher.

7. The Checkpoint Center teachers were involved with the actual instruction of children at least 200 minutes per day and spent approximately 60 minutes per day for activities such as testing, preparing reports and having conferences with appropriate personnel.

After a youngster was selected to receive Center services, the Checkpoint teacher moved through the following steps:

1. An attempt was made to determine <u>why</u> and in <u>what</u> ways the child was underachieving. This was done through diagnostic testing, a review of the cumulative record and through consultation with the classroom teacher, reading teacher, counseling teacher, nurse and other appropriate personnel.
2. Specific learning objectives for the child were identified in consultation with the classroom teacher and, in many cases, with the reading and/or mathematics specialist.
3. The instructional program designed for each child was based upon an identified learning style and assessed skill needs. Consideration was given to approaches used in the regular

classroom so that Center activities could be integrated with classroom approaches.

4. The instructional program was implemented. Periodic reports were given to the classroom teacher.
5. Evaluation took place in terms of the learned objectives through criterion-referenced measures. At the time of the evaluation, a determination was made concerning which specific objectives had been mastered. If all objectives were met, then another needs assessment was conducted to identify other objectives for the child.

In essence, the Checkpoint Center teaching approach was individual, personal, diagnostic and prescriptive, related to very specific skill areas and coordinated with classroom experiences of the children.

Definition of Terms

In this study, the term "urban children" refers to pupils enrolled in the Philadelphia Public Schools. The schools involved in the study were located in various parts of Philadelphia and enrolled children who represented various ethnic, racial and socio-economic groups.

For the purposes of the Checkpoint Program and of this study, "low achieving" children were identified as those who scored at or above 75 on the Slosson Intelligence

Test (102) and scored at or below the 20th percentile in "total reading" in the Reading Section of the California Achievement Test (106). Children who scored below 75 on the Slosson or who have been recommended for special class placement by a certified school psychologist were not admitted into the program and were not included in this study.

"Individualized instruction" was defined as the organization of instructional materials and procedures that will permit each student to progress in accord with his own abilities and interests. In the Checkpoint Center Program and in this study, the notion of individualized instruction also included a procedure which was based upon diagnosing individual learning problems and/or specific academic skill deficiencies, prescribing individual programs designed to alleviate or circumscribe identified learning problems and eliminating skill deficits. Also, "individual instruction" in this study included a daily personalized exchange, directly related to the individual child's prescribed program, between a Checkpoint Center teacher and/or the instructional aide and the child.

The literature contained many and varied definitions of the "self concept" construct. The following definition provided by Soares and Soares (104:2) contains the major aspects of the general notion:

"The 'self concept' is the system of perceptions

> which the individual formulates of himself in awareness of his distinctive existence."

In this study, "self concept" was defined in terms of total scores obtained on self or observer self concept assessment scales. These scales and the construct of self concept are discussed in other sections of this paper.

Hypotheses

The basic question of interest in this study was:

> Does the Checkpoint experience result in significantly greater improvement in self concept than does participation in the regular school program alone?

In order to respond to this question, a careful measurement of self concept was necessary. Literature related to the assessment of self concept indicated that each type of measure has weaknesses and that a more rigorous assessment can be gained through the use of several instruments and the use of more than one approach (18:21). An investigator can feel more confident in the results of an assessment which is based upon a combination of methods. Therefore, three instruments were used in this study to assess self concept. These instruments included:

> The Self Appraisal Scale (SAS)
>
> The Florida Key Scale (FKS)
>
> The Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself) (P-HCSCS)

The Self Appraisal Scale (SAS), developed by Davidson and Greenberg, and the Piers-Harris Children's Self Concept Scale (P-HCSCS) are self report type self concept assessment

scales. The Florida Key Scale (FKS) was developed by Purkey and Cage for use by teachers to assess inferred pupil self concept as a learner.

By comparing the relative growth in self concept of low achieving urban children, considered to be of normal intellectual ability, who attended Checkpoint Center classes for a portion of the day with similar children in the same schools and grade who are not exposed to the specialized individualized instruction of the Checkpoint Center, it was anticipated that the possible effects of the Checkpoint experience on self concept could be assessed. Based upon the assumption that self concept can be quantified, three hypotheses stated in the null form were formulated.

If a group of low achieving third grade urban children, not previously exposed to the individualized instruction of the Checkpoint Center Program, were admitted to Checkpoint Centers for 40 minutes each day during a ten week period and compared with a group of low achieving third grade children from the same schools, who were never exposed to the individualized instruction of the Checkpoint Center Program, the following null hypotheses would be true:

H_o 1: There is no statistically significant difference when the change in mean scores on the Self Appraisal Scale between a pre- and post-assessments of children partici-

pating in the program is compared to the change in mean scores of children in the control group.

H_o 2: There is no statistically significant difference when the change in mean inferred self concept, as a learner, scores on the Florida Key Scale between a pre-and post-assessments of children participating in the program is compared to the change in mean scores of children in the control group.

H_o 3: There is no statistically significant difference when the change in mean scores on the Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself) between a pre-and post-assessments of children participating in the program is compared to the change in mean scores of children in the control group.

The level of significance for rejection of the null hypotheses in this study was established at .05. Therefore, the probability of a statistical difference between the two groups occurring by chance was set at less than five times in 100. If the appropriate statistic obtained from tests of each of the hypotheses was statistically significantly different from that expected by chance, then it was possible to reject each of the null hypotheses in favor of stated alternatives. Since existing evidence suggests that

individualized instruction tends to produce improved self concept, the following alternative hypotheses were formulated:

H_a 1: The change in mean scores on the Self Appraisal Scale between pre- and post-assessments of children participating in the Checkpoint Program is greater than the change in mean scores of control group children.

H_a 2: The change in mean inferred self concept, as a learner, scores on the Florida Key Scale between pre- and post- assessments of children participating in the Checkpoint Program is greater than the change in mean scores of children in the control group.

H_a 3: The change in mean scores on the Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself) between pre- and post- assessments of children participating in the Checkpoint Program is greater than the change in mean scores of children in the control group.

Delimitations

Although the Checkpoint Center Program served children in grades one, two and three, the study was limited

to include only children in grade three.

Of the 100 Checkpoint Centers that were in operation in Philadelphia, 80 had teachers with at least a few months of Checkpoint experience prior to September 1974. Among the schools with the experienced teachers, 15 were providing instruction for third grade youngsters who had no previous exposure to the program. Therefore, although this study has implications for all Checkpoint Centers and similar programs with personalized instruction, the study was limited to the group of 15 schools.

CHAPTER II

REVIEW OF LITERATURE

The Self Concept

There appeared to be agreement among writers such as Labenne and Greene (55), Purkey (73) and Wylie (115), who have traced the development of self theory, that William James' discussion on the "self" in his book the Principles of Psychology published in 1890 contributed to currently accepted notions of self. James believed that a man's "me" can be divided into the following three components: the "material me", the "social me" and the "spiritual me" (51:44). In addition, James believed that man "has as many different social selves as there are distinct groups of persons about whose opinion he cares" (51:46). Although there was considerable disagreement among James' contemporaries concerning the nature of self, the need to place self or ego as a central aspect of psychological theory was shared by Dewey, Cooley, Royce, Titchener and McDougall (18:5). Unlike James, Freud saw personality as made up of three major systems: the "id", "ego" and "superego". Human behavior is nearly always the product of an interaction among the three systems. The ego maintains a psychic balance between the demand of the person's moral inclinations, the superego, and the material impulses,

the id, (43:8). Although Freud focused his attention on the effects of behavior resulting from the interaction between the conscious and unconscious, his influence on self theory development is acknowledged (18), (43), (55), (80), (115).

During the first few decades of the twentieth century, theories related to self received little prominence. This apparent lack of interest on the self was probably due to the influences of Watson's behaviorism and Thorndike's connectionism and other efforts to quantify and consider only observable acts in the analysis of human behavior. Wylie (115) indicated that between the 1920's and the late 1940's, the self construct did not receive much attention from the behavioral and functional schools which were dominating American psychology. Although there was a general lack of emphasis on self theory, there were exceptions to this general neglect. Purkey (80) cited Mead, Lewin and Goldstein as notable exceptions. Mead made the concept of self:

> "a major part of his theoretical writing on the philosophy of society and described in detail how the self is developed through transactions with the environment. He argued that personality rather than being anchored on biological variables, was determined by social-psychological factors" (80:5).

According to Purkey, Lewin considered self as the "relatively permanent organization which gave consistency to the entire personality" and Goldstein examined the processes of "self-actualization, as contrasted with those of the sick

organism which must constantly worry about bodily preservation" (80:5).

The social psychological theories of Horney and Sullivan were somewhat influenced by the theories of both Adler and Freud. Adler, who broke with Freud over the issue of sexuality, was still strongly influenced by him throughout his life. In contrast to Freud's major assumption that man's behavior is motivated by inborn instincts, Adler assumed that man is motivated mainly by social urges (43:11). Horney shared Adler's view that man's behavior, rather than instinct was primarily learned and susceptible to change. She proposed that the vast majority of human behavior is "learned in relation to one's socio-cultural environment" and necessitates a "study of the relationship between one person's behavior and that of another" (43:11). Sullivan, a self theorist, was concerned with the notion of self and its relationship to "significant others" in a child's environment. According to Sullivan, the basic components of the self concept are produced from the "reflected appraisals of significant others in the individual's life" (18:13).

The publication of Allport's book, Personality, A Psychological Interpretation in 1937, seemed to have been the beginning of renewed American interest in self (18:9). Hilgard in his presidential address before the American Psychological Association convention in 1949 lent prestige and support to efforts which were devoted to a better

understanding of self (18:10), (80:5).

Rogers (91) developed a theory of personality that relied upon the construct of self. Rogers felt that the individual's total experience, which includes everything to his awareness, constitutes the "phenomenal field". The individual's behavior is dependent upon his frame of reference (phenomenal field) which is only known to him. The self concept, according to Rogers is:

> "the organized consistent conceptual gestalt composed of perceptions of the characteristics of the 'I' or 'me' and the perceptions of the relationships of the 'I' or 'me' to others and to various aspects of life, together with the values attached to these perceptions" (90:200).

In phenomenology, the self is the crucial variable in behavior and that the reality of an occurrence lies not in the event but in the individual's experience of the event or the phenomenon. Combs and Soper defined the self concept as "the organization of all that the individual refers to as 'I' or 'me'...a patterned relationship or 'gestalt'" (21:134). Combs and Snygg defined concepts of self as "those more or less discrete perceptions of self which the individual regards as part, or characteristic of his being" (20:42). The "phenomenal self" includes "not only a person's physical self but everything he experiences as 'me' at that instant" (20:44).

Because of the historical development of theories concerning self concept, the literature reveals an endless list of terms such as social self, self regard, self esteem,

self evaluation, phenomenal self and self image which all in essence refer to self concept. The term "self concept" is generally attributed to V. C. Raimy (18:3). Many of these terms have overlapping definitions and are associated with theories which are often ambiguous and incomplete (52:1). Wylie wrote:

> "Any given theorist, often seems to include several quite disparate ideas under one self-referent label, while using several different labels to indicate what appears to be the same idea. Moreover, there is no consistency in usage among theorists" (117:729).

Thus the evaluator or educator who attempts to study self concept is faced with the task of clearly identifying what he is assessing.

Raimy conceived the self concept as the "map which each person consults in order to understand himself, especially during moments of crisis or choice" (86:155). Coopersmith defined <u>self-esteem</u> as the

> "evaluation which the individual makes and customarily maintains with regard to himself; it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself" (24:4).

Coller pointed out that a close inspection of some definitions reveals that self concept should be regarded "as a generic term for a set of concepts of self that involve aspects of "self evaluation" and/or "self description" (18:15). He continued that the sub components of self evaluation

include "self appraisal" and "self regard". Self appraisal "involves an explicit valuing of one's good and bad points" (32:486), while self regard means the "congruence between self and ideal self" or "discrepancies between self and ideal self" (115:40). Coller listed the sub components of self description as "self image" and "self awareness" (18:16). The self image, which is complex and involves among other things: character, status and appearance is defined as "the self one thinks oneself to be" (32:487), while self awareness is defined as "knowledge of one's own traits or qualities, insight into, and understanding of, one's own behavior and motives" (32:486).

Engle (31) stated that self attitudes of adolescents remain relatively stable, while Piers wrote that this stability may be less in early childhood (75:18). Coopersmith (24:21) wrote that:

> "although the idea of the self is open to change and alteration, it appears to be relatively resistant to such changes."

Snygg and Combs (20:161) stated that "self concept changes may occur with dramatic suddenness but that rapid change should not be anticipated." Although the references cited indicate that the tendency to change self concept may be slow, the possibility of relatively rapid change, especially among primary grade children, is not eliminated. Coller described the complexity of studying self concept by indicating that: "Aside from evaluative and descriptive dimensions, self concept has both phenomenal (conscious)

and non phenomenal (unconscious) aspects." In addition, self conceptions may vary with respect to a given situation. He followed, however, by stating that "if we are to make separate measurements of self concept for each discrete situation we will have a very awkward science" (18:18).

Assessment of Self Concept

According to Coller (18:21), the assessment of self concept may be approached by at least the use of five general techniques. His list includes the self report, direct observation, behavioral traces, projective techniques and any combination of the aforementioned techniques. Each approach has its advantages and limitations. In the case of the self report, for example, the individual's response may be influenced by what he feels is acceptable to the examiner. However, many problems related to the self report can be reduced through instrument construction and by establishing good rapport between the examiner and the respondent in a non threatening climate. The most frequently used instruments in self concept research are self report inventories (52:4).

The controversy related to the measurement of self concept and especially the use of the self report as an assessment tool is recognized. Wylie (115) published a review in 1961 of 493 research reports concerned with studies of self concept. In an examination of Wylie's reports purporting to explore the self concept, Combs (22)

argued that many were not measures of the self concept but rather studies of the self report. Combs and his associates (19), (22) have vigorously challenged the use of the self report to measure self concept. They indicated that the self report is greatly affected by factors that include the individual's general awareness, availability of adequate symbols for expression, willingness to cooperate, the individual's feeling of personal adequacy and social expectation. Combs felt that the self concept is an internal organization of the individual's perceptions about himself, while the self report is a behavior that represents what the individual is willing and able to say about himself. As a result of his study, Parker (70:699) concluded from the data that self report and inferred self concept do not furnish the same insight into the personality of individuals. Parker (70:699) also reported that:

> "Correlations between self report and inferred self concept diminished when social expectancy was emphasized. It is apparent that external changes can cause differences in statistical relationship between the self report and inferred self concept. However, the data does not lend itself to a clearcut conclusion about the reasons for these differences."

Although the use of self reports as a measure of self concept is controversial, Labenne and Greene (55:20) wrote:

> "Despite its subjective nature, the self report yields evidence that can be obtained in no other way."

If the self concept consists of the "traits,

attributes and limitations an individual assigns to himself" (114:60), then he, the individual, has the best vantage point to at least report (not evaluate) the condition of his self concept. Bakan (2) stated that there is no investigatory method which is pure and provides an absolute guarantee against the commission of error. He also rejected the idea of eliminating introspection as a method of assessing an aspect of one's personality.

A comparison of inferred self concept and self concept assessed through the use of the self report may be academic. Even if the self report were completed with absolute honesty, what a person's self concept "is" and what he "thinks his self concept is" may vary. And, if an observer accurately infers what the individual's self concept "is", his conclusion may also be at variance with the individual's perception of his self concept. In addition to the difficulty in comparing one type of self concept measure with another, there is, as previously indicated, little consensus on a definition for the construct of self concept. Labenne and Greene (55:11) stated that "the various definitions of self concept reveal that there is limited agreement among those using the term." Because of this general lack of agreement, Coller in his review of literature related to self concept and self concept assessment instruments concluded: (18:73-74)

> "It is probably not possible to produce a widely acceptable literary definition for

> self concept.....
> "Self concept must be defined operationally as that construct or set thereof assessed by the set of so called self concept instruments.....
> "It is inappropriate to attempt to validate a self concept measure by simply comparing it with another self concept instrument."

It may be appropriate at this point to quote the following related to self concept assessment from a paper presented by Anthony and Louise Soares (104:9) at the American Educational Research Association Meeting in 1973 in New Orleans:

> "All these (problems) may be implicit in the measurement process of the self concept. Yet, what is the alternative? Either we recognize the attendant problems, continually strive to improve our techniques, and go on accumulating data in order to expand our knowledge of the self, or we throw up our hands and say, "What's the use?".

Academic Achievement and Self Concept

Lecky (58) was among the first to show the relationship of low academic achievement and the child's description of himself as a non learner. A review of the literature indicated a rather broad consensus that poor self perception leads to lower performance while favorable self perception is positively related to school achievement. Studies by Campbell (13), Ozehosky and Clark (68), Walsh (109), Shaw and Alves (99), Dyson (29), Coplin (14), Coleman (17), Buckley and Scanlan (11), Paschal (71) and Benjamins (5) supported the notion of a positive relationship between self concept and academic achievement. Labenne and Greene stated:

> "Empirical and experimental data clearly indicate a direct relationship between the child's self concept and his manifest behavior, perceptions and academic performance" (55:24).

Shaw, Edson and Bell (100) found that male achievers feel more positive about themselves than do male underachievers. Fink (36) concluded that there is a relationship between self concept and academic underachievement and that this relationship is stronger among boys than girls. Bledsoe (7) also found a stronger relationship between the self concept and achievement in boys than in girls. Brookover, Thomas and Paterson (10) found statistically significant positive correlation between self concept and achievement while Grienecks (42) concluded that self perception appears to be the most accurate predictor of academic achievement. Purkey (79:23) stated that:

> "It seems clear that academic underachievement is related to basic personality structure, particularly inadequate concepts of self."

Coopersmith (23), McCallon (61) and Piers and Harris (74) found significant, but low, correlations between self perception and academic achievement. McCallon noted the possibility that a non-linear relationship may exist between these measurements. Although it is generally held that positive self concept accompanies successful adjustment and achievement, not all studies support this assumption. Studies by Fredler, Dodge, Jones and Hutchins (35), Butcher (12) and Wass (110) did not support the notion that positive self concept is correlated with successful

adjustment and achievement.

Reading and Self Concept

Arthur Gates estimated from his clinical experiences that 75 percent of the children with severe reading disabilities showed personality maladjustments (6:232). Since that time, the relationship between reading failure and various personality maladjustments has been explored in many research studies. In a number of these studies, the correlation between reading achievement and self concept has been examined. Green (40) reported that extended readiness programs for developmentally immature first grade children produced significantly higher self perceptions. Wattenberg and Clifford (111) investigated the ability of a self concept measure to serve as a predictor of later reading proficiency. They administered a measure of self concept to 128 subjects in kindergarten and measures of reading achievement when the children were in second grade. The measure of self concept proved to be somewhat more predictive of reading achievement than did a measure of intelligence. The investigators concluded that, in general, "self concept phenomena are antecedent to and predictive of reading accomplishment" (111:466). Another study that indicated a cause and effect relationship between self and reading achievement was conducted by Mary Lamy (56). In her study, measurements of self concept were made in kindergarten prior to reading instruction and repeated in first

grade. Self concept scores correlated as highly with reading achievement as did intelligence scores. Together the two scores were found to be better predictors of reading success than either score taken separately. In addition to the cited studies, McClendon (62), Palardy (69) and Herbert (47) reported to have found a positive relationship between reading achievement and self concept among early primary grade children. Conflicting results that indicate no definite association between reading and self concept at the primary level reported by Butcher (12), Wass (110), Ruhley (95) and Williams (112) suggest that the relationship may be more complex than had, heretofore, been conceived.

In a study by Hutchinson (49) of the relationship between the self concept of intermediate grade children and attitude toward reading, she concluded that the child's attitude toward reading is positively related to his self concept. Campbell (13), Bledsoe (7) and Roth (94) also found a positive relationship between self concept and reading achievement among intermediate grade children. Henderson (45), on the other hand, found no significant difference between reading achievers and non achievers on a self devised test of self concept. In an interesting study which included college students enrolled in a remedial type of reading program, Fennimore (34) reported that as reading achievement improved, concept of self took a negative direction. The relationship between self concept and reading achievement may conceivably be a function of age.

Although the research tends to generally indicate that a positive self concept contributes positively to a child's reading ability, curriculum developers and teachers have given little attention to the evidence (48), (84). Roger Farr in his widely read publication, Reading:What Can Be Measured?, indicated that there is little research concerning the best way to use information gathered from the measurement of psychological factors such as self concept (33:120). While the evidence does not always support a cause and effect relationship, an implication that may be reasonably drawn from research is that good self concept has a positive effect on a child's ability to read. "The compounded evidence from the available studies appears to be too strong to ignore" (84:439).

Classroom Atmosphere and Self Concept

An important and frequently cited study in the literature relating teacher effects on pupil self concept was conducted by Davidson and Lang (26). The authors examined how low self concept is influenced in a classroom setting by studying the relationship between children's perceptions of their teacher's feeling toward them and the children's perceptions of themselves, academic achievement and classroom behavior. The investigators found that there was a positive correlation on all measures and concluded that the teacher's feelings of acceptance and approval are transmitted to the child and perceived by him as a positive appraisal.

Thus, the teacher's positive feelings begin a cycle. The child achieves and the teacher's feelings cause the child to strive for further approval.

Staines (105) concluded from a study concerned with the part teachers play in the development of the child's self, that teaching methods can be adapted so that definite changes will occur in the self without loss of academic gain in the process. The study indicated that changes in the child's self do occur as an outcome of the learning situation and that the self must be recognized as an important factor in learning.

According to Coopersmith (24:37), a major item which contributes to the development of self esteem "is the amount of respect, acceptance and concerned treatment that an individual receives from the significant others in his life." The teacher, especially at the elementary level, must certainly be considered as a "significant other" in a child's life.

In a study on the effects of methodology on the self concept, Boyko (9) concluded that neither the traditional didactic nor the experimental factor in the discovery method of instruction was a significant factor in changing the self perception of students in the intermediate grades. He concluded that teachers must do more than simply use either of these methods if they hope to enhance the self concept of their students.

Research conducted by Rosenthal and Jacobson (93)

illustrates that children who are expected to gain intellectually by their teachers tend to, in fact, show greater intellectual gains than do children for whom gains are not expected. Teachers working with elementary children revealed tendencies of differentiated treatment toward pupils who were said to be bright or who would be expected to make great gains. It was hypothesized that the teacher's tone of voice, facial expression, touch and posture projected his expectation to the pupils.

Henderson and Long (46) investigated the personal-social characteristics of successful first graders among a sample of rural southern black children. The authors cited that a major implication of their findings for education is that the "personal-social correlates of academic success among school beginners involve complex patterns of self-other orientations" (46:112). Henderson and Long (46:112) wrote:

> "When one considers the social deprivations experienced by substantial numbers of Southern rural Negro children, it is not surprising to find behavioral and conceptual patterns implying withdrawal, fear, and hostility among the least successful. For these children, significant changes toward greater academic success could probably be achieved only by a classroom situation where a great deal of individual attention and instruction and warm and close teacher-pupil relationships would produce an atmosphere which would build up their trust and confidence."

Combs (19) wrote that a teacher's attitude toward himself and others is as important as his teaching procedures. A teacher with positive attitudes can promote a positive

classroom atmosphere, while a teacher with negative attitudes promotes a feeling of negative self attitude among the pupils. If a teacher believes that his pupils can and will achieve, then students tend to be more successful.

In a study conducted by Purkey, Graves and Zeller (82), designed to explore the impact of an innovative team-teaching, completely ungraded elementary school on the professed self-esteem of pupils, the investigators reported that:

> "the general findings of this study indicate that pupils in an innovative and humanistically oriented elementary school evidence more favorable self-esteem than pupils in a comparable, but traditionally oriented elementary school. Although results do not take into account the length of time an individual pupil was exposed to the experimental school, the data suggest that prolonged exposure to the environment of the innovative school does have a positive influence on the professed self-esteem of children ages eight to twelve" (82:170).

In another publication, Purkey (79:28) wrote:

> "There is considerable evidence to support the assumption that a psychologically safe and supportive learning situation encourages students to grow academically as well as in feelings of personal worth.....
> "A supportive educational atmosphere is one in which each student is made to feel that he belongs in school, that he is important, and that he is capable of learning. It is one in which praise is used in preference to punishment, courtesy is used in preference to sarcasm, and consultation is used in preference to dictation."

Bledsoe and Garrison (8) pointed out that the role of the school, and that of the teacher, is of utmost importance in the creation of a climate favorable to the development of healthy concept of the self. Unhealthy influences

can develop in the school setting that may adversely affect the self concept. Sebeson (98:462) stated:

> "Studies thus far have shown that self-concept develops through imitation, identification, and incorporation of the way the child perceives himself in relation to significant others."

Richardson (89:112-113) wrote:

> "The teacher is in control of several aspects of learning which have a direct impact upon each child's perception of himself as adequate-worthy or inadequate and unworthy. While the parent has influenced the child's self concept earlier, the teacher has a more powerful influence, especially in aspects of the self-concept relating to intelligence and competencies. Consciously or unconsciously the child thinks, "Who can know better than the teacher whether I am bright or dumb?" Early and careless estimates of children's abilities while often erroneous, have a lasting effect."

Soares and Soares wrote (104:10):

> "Self-perceptions cannot evolve in a vacuum. The self needs a comparative base, an external frame of reference, which comes primarily from the people surrounding the person, his interactions with them, how he perceives their views of him, and his experiences. In early childhood, the parents and other family members are primary forces for self-definition. In the school years, teachers and peers also become important, with peers particularly diluting some of the parental power but not replacing it entirely."

Special Individualized Programs for Low Achievers and Self Concept

The need for answers concerning the most profitable approach to teach children who apparently do not learn easily has probably prevailed since the first attempts to instruct. Unless there was a specific social reason for a particular child to succeed academically, those with

learning difficulties were simply guided into endeavors requiring less scholarly development. The problem of the low achiever became acute with the advent of compulsory school attendance and with the efforts to provide a good basic education for all children. In the United States, the problem of low and/or underachievement became a serious area of concern when schools in both urban and rural settings began to fail to meet the basic skill development needs of an alarmingly large portion of students while using traditional approaches which, heretofore, appeared to be effective. Gradually, school districts, states, the federal government, industry and private foundations launched or sponsored programs designed to find better ways to reach the low achieving child. Although hundreds of such programs may exist, not all have published descriptions or reports of success or failures. Some of the programs contained various aspects of the Checkpoint Program. Practices involving the use of classroom aides, reduced staff-pupil ratios, emphasis on individual prescriptive and diagnostic instruction, "cycling" children out of regular classrooms and the linking of good self concept and other favorable attitudinal development with academic achievement were basic elements in many programs directed to assist the low achiever.

Fisher (37) described a program resembling the Checkpoint Program that was established in Detroit in 1965. Students were transported by bus from their regular

schools to a Communication Skills Center. Classes averaging four in size met one hour a day, four times each week. Fisher reported significant positive results both in reading achievement and self esteem associated with participation in the program. In reporting the results of the first year of a five year study designed to discover classroom strategies that can improve children's achievement and their self concept, Sears (97) stated that evidence from the first year suggests that an individualized style of teaching, as contrasted with group instruction, significantly increases children's verbal achievement. In a study (103:6), the author noted that specialized reading instruction seemed to provide experiences which aided in increasing both reading efficiency and self concept scores. In reporting the results of a study of the Westinghouse Learning Corporation's individualized instruction curriculum, Powell (77) stated that self esteem among elementary school children exposed to the Program greatly increased during a six month period of operation. Baruffi (4) in a study of the effects of a summer school program for children of migrant workers found change only in one area of the self concept of the experimental group and no significant difference in academic growth when comparing an experimental and control group.

Myers (65) studied the effects of Individually Prescribed Instruction (IPI) on the self concept. He found that when he compared the self concept groups of

third, fifth and sixth graders enrolled in IPI programs, statistical analysis of the data indicated that students who had been in IPI programs three years had significantly lower self concepts than students who had been in IPI programs only one or two years. Dethmers (27) reported that in a study involving fifth and sixth grade children in which a traditional teaching approach was compared with an innovative method using individualized instruction and contracts, significant differences, all in favor of the traditional program, occurred in measures of vocabulary skills, language skills, arithmetic skills and self concept.

In a study by Olsen (67) concerning the effects of enrichment tutoring upon self concept, educational achievement and intelligence of male underachievers in an inner-city elementary school, the author reported no significant differences in most subtests between tutorial and non-tutorial groups in measurable self concept gains on the "Coopersmith Self-Esteem Inventory". Teachers reported, however, positive changes in self confidence, self attitude and self worth on the part of participating pupils. In a study by Nichols (66) on the effects of tutoring on the self concept, reading achievement and selected attitudes of culturally disadvantaged children, he found no significant differences in change between experimental and control groups in self concept as measured by the "Sears Self Concept Inventory". However, teachers of 70 percent of the children felt that the program developed

improved self concept.

In a report of an individualized-contract program involving fifth and sixth grade students in Duluth, Minnesota, Simula (101:54) stated that:

> "students from a middle socioeconomic background who were enrolled in the individualized-contract form of classroom organization attained expected levels of academic achievement.....
> There were numerous indications that students in the individualized program were acquiring less positive attitudes about learning, school, fellow classmates, and themselves."

It must be carefully noted, however, that the assertion of changed attitudes in the Duluth study was based upon opinion and not rigorously determined. In a summer remedial reading and enrichment program in Thomasville, Georgia which permitted large numbers of individual student-teacher interactions to take place, the directors concluded that children underwent changes in attitude and self concept because of participation in the program. Again, the change in self concept was mainly based upon professional opinion (88:18). In Marysville, California, in a program closely resembling Checkpoint, children received instruction one hour a day, four days each week in groups of twenty-four students. An evaluation of the program indicated that children improved in oral and silent reading and word analysis. Positive changes in attitudes toward school and self were noted (87). In this study also, the recognition of improvement in attitude toward self was based upon opinion. In a report of

an individualized reading program in New York City, the author stated that children made gains on city wide reading achievement tests as a result of exposure to the program. And,

> "More important than scores are the children's feelings and their enthusiasm for reading" (50:758).

In the evaluation of this program and, apparently, many others which involve individualized instructional procedures, investigators reported improvements in self concept without any rigorous attempt to determine the measure of changes. The fact that this practice was often followed helped to influence the direction of this study. The tendency to accept the conclusion that children are changing in self concept with exposure to individualized programs without an attempt to quantify the change appeared to be prevalent.

CHAPTER III

PROCEDURES

This study was designed to measure the effects of individualized instruction (Checkpoint Center type) on the improvement of self concept of low achieving primary grade (one, two and three) urban youngsters. The major question raised was: Will pupil exposure to the Checkpoint Program produce a measurable positive change in self concept during a ten week treatment period?

Time Line

The period between September and December 1974 was selected as the time frame for the study. Teachers reported for duty after summer vacation on September 3, 1974. Schools were selected for the study in early September, after information was received from schools regarding plans for Checkpoint Center pupil grade selection. Once the experimental sites were identified, teachers were instructed to administer the Slosson Intelligence Test (102) to all Checkpoint Center candidates, establish experimental and control groups and collect prestudy data prior to September 27, 1974. By September 30, experimental centers were completely operative and continued to function for 50 consecutive school days. If a Checkpoint Center teacher or aide was absent during the 50 day time interval, the

experimental period was extended so that the center staff provided 50 days of instruction with both the teacher and aide present. In all cases, the 50 day period ended by early or mid-December. At the end of the study period, centers were closed for a short time so that poststudy data could be collected. All data were assembled prior to the Christmas holiday recess.

Selection of Subjects for Experimental and Control Groups

As the Checkpoint Program resumed operation in September 1974, the program expanded from the 84 centers that had functioned between February 1974 and June 1974 to include 100 of the over 200 elementary schools in Philadelphia. Eighty of the original 84 teachers returned to serve in the centers. Therefore, of the total group of 100, eighty teachers had, at least, five months of experience and represented the only corps of "experienced" Checkpoint Center teachers. The principals of the 80 schools with experienced Checkpoint teachers indicated a desire to serve mainly second and third grade pupils who had already been enrolled in the first five months of operation. Since each center had to enroll 60 pupils, remaining openings or places were filled by children from grades one, two and three who had, heretofore, not been exposed to the Checkpoint Program.

In identifying pupils for this study, the following basic criteria were established and used in the selection process:

1. The study would be conducted in such a manner

that would not upset the normal operation of the program or impose a pupil selection process on the schools that would dictate the number of pupils served from each grade.

2. The pupils selected for the study would be from the third grade only. This criterion was established because of the limited availability of self concept measures that could be administered by relatively untrained teachers to young children in grades one and two. In addition, it was the desire of the investigator to include the use of the self report in the study since it contributes an important dimension in the measure of self concept. However, the use of the self report type of scale with children in grades lower than three may not be sound. Purkey writes that "self report inventories have not proven satisfactory with early primary aged children" (83:3).
3. Only pupils who were to be exposed to the Checkpoint Program for the first time in September 1974 would be included in the study. The rationale for this criterion was based upon the idea that if there is a relationship between self concept and the Checkpoint experience, an initial time of exposure must be identified.
4. The study would be confined to schools with

experienced or returning Checkpoint teachers.

Based upon these four criteria, 15 locations were identified as centers with experienced teachers and with plans to enroll new third grade pupils in the Checkpoint Program. These schools were geographically dispersed throughout the City of Philadelphia in such a manner that all major neighborhoods of the City were represented. One hundred eighty-four openings or places for these new third grade Checkpoint pupils were found to be available in the 15 schools. Therefore, 184 was designated as the initial size of the experimental group.

Checkpoint teachers in the 15 experimental schools received referrals from classroom teachers, principals and counselors amounting to 279 third grade youngsters who had no previous exposure to Checkpoint. These children were preliminarily identified by the referral sources as low achieving pupils who were believed to be in the normal range of intelligence (75 or above for this study) and scored at or below the 20th percentile in total reading in the Reading Section of the California Achievement Test (106) in May of 1974. A Slosson Intelligence Test was administered to each of the referred 279 pupils. Fourteen of the group were found to be in the I.Q. range below 75 and 265 were declared eligible for the Checkpoint Program. Youngsters with I.Q.'s of less than 75, as determined by the Slosson, were referred for psychological evaluation and possible placement in a special education program.

Each center admitted new third grade pupils from the qualified pool of 265 to fill existing vacancies. When the number of referrals in a school exceeded the number of pupil places available in the Checkpoint Center, children admitted were selected from the school pool in an unbiased manner. If, for example, a school had six openings and 12 equally qualified pupils were referred for admission, the children were ranked according to referral order and every other youngster was selected for participation in the program. The 81 qualified children who were referred but not admitted into the Checkpoint Program because of enrollment size limitations became members of the "control group". Table 1 shows the distribution of youngsters involved in the study.

All pupils who were identified as experimental or control remained in assigned groups unless transferred from the school. Although there was no change in experimental or control status throughout the duration of the study, only those control group pupils who actually attended school 80 percent of the time during the period of the study were considered in the finally established control group. Only those pupils who were admitted to the Checkpoint Program and received at least 40 of the 50 days (80 percent) of actual Checkpoint instruction designated in the study were considered in the finally established experimental group. See Columns 5 and 7 of Table 1.

Table 1

DISTRIBUTION OF PUPILS IN STUDY BY SCHOOL UNITS

1 Schools (By Identification Number)	2 Number of Pupils Referred (a)	3 Number of Pupils Eligible	4 Number of Pupils Accepted in Checkpoint Program (b)	5 Experimental Group (c)	6 Number Assigned to Control Group	7 Control Group (d)
41	13	12	6	6	6	6
47	14	14	14	10		
36	12	12	12	12		
43	23	21	7	7	14	14
22	13	10	3	3	7	7
27	32	29	20	20	9	9
34	12	12	12	12		
37	27	26	14	5	12	12
33	32	32	27	27	5	5
35	10	7	3	3	4	4
31	5	5	5	5		
23	32	32	32	21		
32	20	20	10	10	10	10
38	6	5	3	3	2	2
42	28	28	16	14	12	12
Total	279	265	184	158	81	81

(a) This group includes only third grade pupils with no previous Checkpoint Center experience.

(b) This group includes the pupils in the preliminary experimental group.

(c) This group includes the pupils in the experimental group who were present for at least 80 percent of the Checkpoint sessions within the study period (40 days).

(d) This group includes the pupils in the control group who were present at least 40 school days between the start and end of the study period. Every pupil assigned to the control group met the criteria of 80 percent of attendance.

Data Collection

Information for every child in the preliminary experimental and control groups was assembled prior to the start of the study period. This information included:

1. Slosson Intelligence Test results (I.Q. scores)
2. The results of the administration of the Reading Section of the California Achievement Test in May 1974. Since the children were in grade two at that time, the information was based upon Level 1, Form A. Achievement Development Scale Scores in "total reading" were recorded.

In addition to collecting the above aptitude and achievement information, the Checkpoint Center teacher administered the following self report type self concept assessment scales to children in both the preliminary experimental and control groups:

1. Self Appraisal Scale (SAS)
2. The Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself) (P-HCSCS)

The children responded to the questions as the Checkpoint teacher read the questions. Since the Checkpoint Center teacher had relatively little contact with the children in the experimental and control groups during the pre-study period, classroom teachers were requested to complete a Florida Key Scale (FKS) for each youngster involved in the study who happened to be in their classes. It was also

assumed that the use of an outside observer, not actually involved in the program, would add objectivity to the assessment process.

With due consideration for the current state of the science in reference to self concept assessment as outlined in Chapter II, "self concept" was defined in terms of total scores obtained from student self reports on the Self Appraisal Scale (SAS) and Piers-Harris Children's Self Concept Scale (P-HCSCS) and from inferred assessments using the Florida Key Scale (FKS).

The Self Appraisal Scale, which was developed by Davidson and Greenberg (25:175), is a self report type assessment of self concept. The items in the inventory can be easily understood by third grade children if they are read by the examiner while the children read silently. The four major self concept areas explored in the scale were: social, academic, personal and non-intellectual competencies. Each item contributed to only one sub area and was scored in this study on a three point scale ranging from "Most of the Time" with a value of "2" to "About Half the Time" with a value of "1" and to "Hardly Ever" with a value of "0". Since 24 items were included in the total scale, total scores ranged from 0 to 48. The authors reported a split-half reliability of .77 for the scale (25:175). A copy of the Self Appraisal Scale with score values used in this study is included in Appendix A.

The Piers-Harris Children's Self Concept Scale (The

Way I Feel About Myself), developed by Ellen V. Piers and Dale B. Harris, is a self report type of self concept scale. The individual items in the scale can be understood by third grade children if they are read by an examiner while the children read silently. A child responds "yes" or "no" to statements which are considered to be generally true of him. The scale purports to measure self concept with regard to six dimensions of self concept. The six dimensions include behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, happiness and satisfaction. The instrument was normed on a sample of over 1000 public school children in Pennsylvania school districts; and according to Knapp (52:21), "Scores on the Piers-Harris Scale have been compared with other self concept measures resulting in reasonably high validity coefficients." The elementary school form of the Piers-Harris Children's Self Concept Scale was used in this study. This shortened form included 30 of the 80 items of the complete scale which have the highest factor loadings related to the six dimensions assessed by the instrument. A point value of "1" was assigned to a "yes" response and "0" to a "no" response. Scores, in this study, therefore, could range from 0 to 30.

The Florida Key Scale, which was developed by Purkey and Cage (81), can be used by teachers to infer pupil self concept as a learner. The instrument does not require the cooperation of the subject nor the need for the subject to

be aware that an element of his personality is being measured. The scale provides a total score for self concept, as a learner, and examines the four areas of relating, asserting, investing and coping. Each of the 18 items in the scale is designed to assess aspects of self concept considered to be school related. Items are rated on a six point scale from zero to five. Therefore, total scores may range from 0 to 90. Data involving approximately 1000 students in Florida and Oklahoma schools indicated significant validity and reliability for the students in the sample (81). Since the scale is used by teachers, it can be used to determine inferred self concept, as a learner, of primary grade children. A copy of this scale is included in Appendix B.

After the prestudy data were collected, the children in the experimental group were exposed to the Checkpoint Program. It is important to note that each center served a minimum of 60 children daily in groups of from 12 to 15 in 40 minute time intervals. Many youngsters from grades one, two and three were enrolled in the centers who were not part of the experimental group. While the centers in the study served 900 children, only 184 were in the initial experimental group. In the course of the Checkpoint sessions, experiences were provided that not only challenged but also guaranteed success. When success was attained, the children were encouraged to feel proud of their progress. Although it was policy to have a personal encouraging type

of contact between the teacher and/or the instructional aide and each child enrolled in the center on a daily basis, special attention was given to make certain that this daily pupil-adult exchange took place with all Checkpoint Center pupils in schools serving children in the experimental group.

At the conclusion of the 50 day study period, the Self Appraisal Scale and the Piers-Harris Children's Self Concept Scale were administered to all pupils in the experimental and control groups in exactly the same manner as it was done during the presurvey. The Florida Key Scale was completed for all youngsters in the experimental and control groups by the classroom teachers. There were no changes in pupil assignments and classroom teachers between the pre and post surveys. In addition to the self concept scales, the Checkpoint teachers administered the Reading Section of the California Achievement Test (CAT) to all children in both the experimental and control groups. In this administration, however, Level 2, Form B was used since the children were now in grade three. Achievement Development Scale Scores (ADSS) in "total reading" were again recorded. Pupil attendance was also recorded for both the experimental and control groups.

At the conclusion of the presurvey, recorded information concerning Slosson and California Test data and completed but unscored self concept scales were submitted to the investigator. Again, at the conclusion of the postsurvey, California Test and Attendance data and completed but

unscored self concept scales were also submitted by the Checkpoint teachers. The data were examined for completeness upon receipt. It was discovered at that time that all pupils in the control group had attended school 80 percent of the days between the pre and post survey. Although general attendance in the experimental group was good, for varied reasons, 26 pupils in the original experimental group had been present in the Checkpoint Centers less than the required 40 days during the study interval. For the purposes of this study, a pupil must have attended a center at least 40 days (80 percent of the study period) during which the pupil, Checkpoint Center teacher and aide were present. It was necessary, therefore, to drop these 26 pupils from the experimental group. This fact accounts for the discrepancy between the size of the preliminary experimental group and the finally determined experimental group. After dropping the 26 pupils from the study, all pertinent test data and actual self concept scale item responses were key punched and prepared for analysis.

CHAPTER IV

RESULTS

Three related hypotheses were investigated in this study. Each hypotheses addressed a comparison between Checkpoint Program children and control children in terms of changes in self concept. As previously indicated, the three independent self concept measures used were: the Self Appraisal Scale, the Piers-Harris Children's Self Concept Scale and the Florida Key Scale.

The same procedure was used in the analysis of self concept total scores for each of the three scales. Because of the nature of the investigation, a two-factor analysis of variance experimental design, with repeated measurements on one factor, was employed. Winer (113:299) described this approach as a powerful means of assessing change due to treatment. One factor was treatment and had two levels: Checkpoint Program and control. The other factor, the repeated factor, also had two levels: Pretest and Posttest. The least squares method of analysis was employed throughout because of unequal cell sizes. This experimental design was used in addressing each of the stated hypotheses.

Reading Achievement

The primary aim of this study was to determine whether or not individualized instruction in the basic skill of

reading with active daily teacher-child interaction would result in positive changes in children's overall self concept. Discussion surrounding the relationship between self concept and school achievement was found in the literature. The determination of which is the antecedent condition, which is the cause and which is the effect, has not been absolutely determined (52:5), (80:23), (82:166). As indicated in Chapter III, in an effort to assess achievement growth, data were collected prior to and following the 50 day period of the study. The pretest consisted of the 1970 Edition; Form A, Level I, Reading Section of the California Achievement Test (CAT Reading). Posttest data were scores from Form B, Level II, of the same test. The two forms of the California Achievement Test (CAT) were considered to be essentially equivalent in terms of statistical characteristics as well as content (106). Achievement Development Scale Scores (ADSS) in "total reading", as defined by the test publishers, were examined. Total scores were analyzed by means of the same analysis of variance design used for the self concept test scores analyses. Both main effects and the interaction effect were found to be statistically significant.

A plot of the treatment group means for pretest and posttest scores revealed the nature of the interaction. Figure 1 shows that little change occurred for the control group children, whereas, considerable growth occurred for the Checkpoint Program children. The analysis of variance

Figure 1

PRE AND POST TEST MEAN CAT READING ACHIEVEMENT DEVELOPMENT SCALE SCORES AND NATIONAL PERCENTILE RANKINGS IN "TOTAL READING"

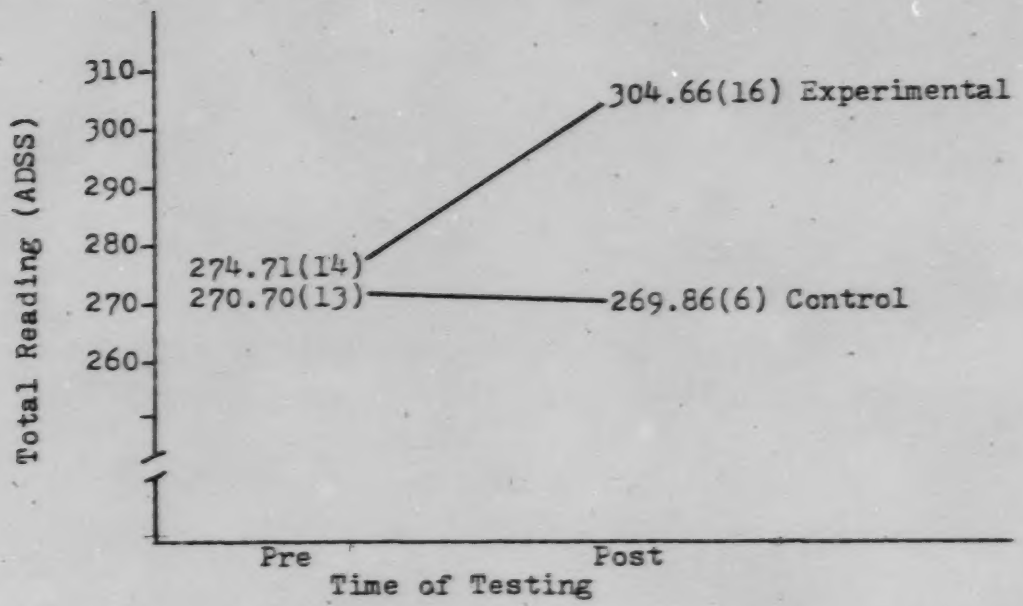

Table 2

ANALYSIS OF VARIANCE SUMMARY: CALIFORNIA TEST ACHIEVEMENT DEVELOPMENT SCALE SCORES

Source	df	MS	F
Between			
B - Groups	1	35584.00	15.40***
Error	203	2310.15	
Within			
A - Pre vs Post	1	36336.00	36.48***
A x B	1	22432.00	22.52***
A x subj. w. grps.	203	996.02	

*** $p \ll .001$

indicated a statistically significant interaction ($F=22.52$; $df=1/203$, $p < .001$) of the two main effects (Groups by Time of Testing). Therefore, the main effect due to Groups was not the same for each of the two levels. Although the pretest scale scores means for the two groups differ somewhat, an analysis of the simple main effect of factor A (Pretest only) for the Checkpoint versus control group comparison resulted in an F ratio of less than unity ($F < 1$; $df=1/406$). Thus, an hypothesis could be accepted that initial test score differences were due to chance and not to real differences between groups.

Results of the two factor, repeated measurements analysis of variance appear in Table 2. Statistically significant main effects appear to be the result of the comparatively large positive change or achievement growth of the Checkpoint children as measured by CAT Reading Achievement Development Scale Scores. Percentile ranks for the scale score means of the two treatment groups are indicated in parentheses next to the scale scores in Figure 1.

Testing of Hypotheses

As indicated in the hypotheses, if a group of low achieving third grade urban children, not previously exposed to the individualized instruction of the Checkpoint Center Program, were admitted to Checkpoint Centers for 40 minutes each day for a ten week period and compared

with a group of low achieving third grade children from the same schools, who were never exposed to the individualized instruction of the Checkpoint Center Program, the following null hypothesis could be formulated:

> H_o 1: There is no statistically significant difference when the change in mean scores on the Self Appraisal Scale between a pre- and post- assessments of children participating in the program is compared to the change in mean scores of children in the control group.

Total scores on the Self Appraisal Scale (SAS) were obtained for each subject by methods described in Chapter III. These scores served as the single dependent variable in the two factor repeated measurements analysis of variance design. Analysis of variance of SAS total scores indicated that the interaction of the two main effects were found to be statistically significant.

Figure 2 depicts graphically the interaction effect. The actual treatment means for each level of each effect appear on the graph to aid in the interpretation of the results. Whereas, the change for the control group from the pretest to the posttest was negative, the change for the experimental group was positive and greater. The fact that these lines are not parallel is indicative of the significant interaction obtained in the analysis. The analysis of variance is summarized in Table 3.

The Groups by Time of Testing interaction was found to be statistically significant ($F=7.77$; $df=1/237$, $p < .01$). Again, a statistically significant interaction in analysis

Figure 2

PRE AND POST MEAN SELF APPRAISAL SCALE TOTAL SCORES

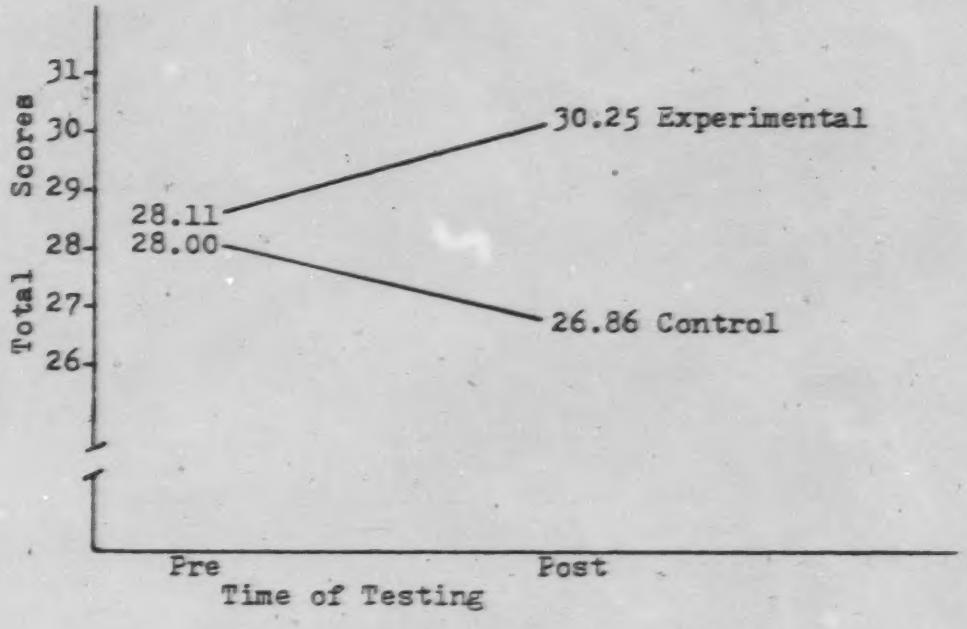

Table 3

ANALYSIS OF VARIANCE SUMMARY: SELF APPRAISAL SCALE TOTAL SCORES

Source	df	MS	F
Between			
B - Groups	1	326.00	5.45*
Error	237	59.82	
Within			
A - Pre vs Post	1	126.56	3.42 n.s.
A x B	1	287.31	7.77**
B x subj. w. grps.	237	36.99	

* $p < .05$ ** $p < .01$

of variance, in general, indicates that a treatment effect is not the same for each level of treatment. Direct interpretation of overall main effects is, as a result, less straightforward than when an interaction is not significant. Interpretation of main effects are ordinarily made for each level of the main effect of treatment when a statistically significant interaction occurs.

The repeated measurements main effect, Pretest versus Posttest, without regard to treatment groups, was not found to be statistically significant at a commonly accepted level. The main effect for Groups (Checkpoint versus control children), without regard to Time of Testing, was found to be statistically significant ($F=5.45$; $df=1/237$, $p<.05$). That is to say, the probability of an overall treatment mean difference as large as that obtained between Checkpoint children and control children on the Self Appraisal Scale (total scores) would occur by chance less than five times in 100. It could, therefore, be concluded from the data that Null Hypothesis 1 may be rejected.

The second null hypothesis reads:

> H_o 2: There is no statistically significant difference when the change in mean inferred self concept, as a learner, scores on the Florida Key Scale between a pre- and post-assessments of children participating in the program is compared to the change in mean scores of children in the control group.

Total scores on the Florida Key Scale were obtained for

each subject by methods described in Chapter III. These scores served as the single dependent variable in the two-factor repeated measurements analysis of variance design. Analysis of variance of the Florida Key Scale total scores indicated that the two main effects and the interaction of the two were found to be statistically significant.

Figure 3 depicts the interaction effect. The actual treatment means for each level of each effect appear on the graph to aid in the interpretation of the results. An analysis of the simple main effect of Factor A (Pretest only) resulted in an F ratio of 3.51 (df=1/474, $.05 < p < .10$). The change for the control group from the pretest to the posttest was relatively slight while the change for the experimental group was much greater. The fact that these lines are not parallel is indicative of the significant interaction obtained in the analysis. The analysis of variance is summarized in Table 4.

The repeated measurements main effect (Pretest versus Posttest), without regard for treatment groups, was also found to be statistically significant (F=37.09; df=1/237, $p < .001$). The obtained difference between means for pretest versus posttest, without regard to treatment group, could be expected to occur by chance less than one time in 1000. The main effect for Groups (Checkpoint versus control children), without regard to Time of Testing, was found to be statistically significant (F=14.09; df=1/237, $p < .001$). That is to say, the probability of an overall

Figure 3

PRE AND POST TEST MEAN FLORIDA KEY SCALE TOTAL SCORES OF INFERRED SELF CONCEPT

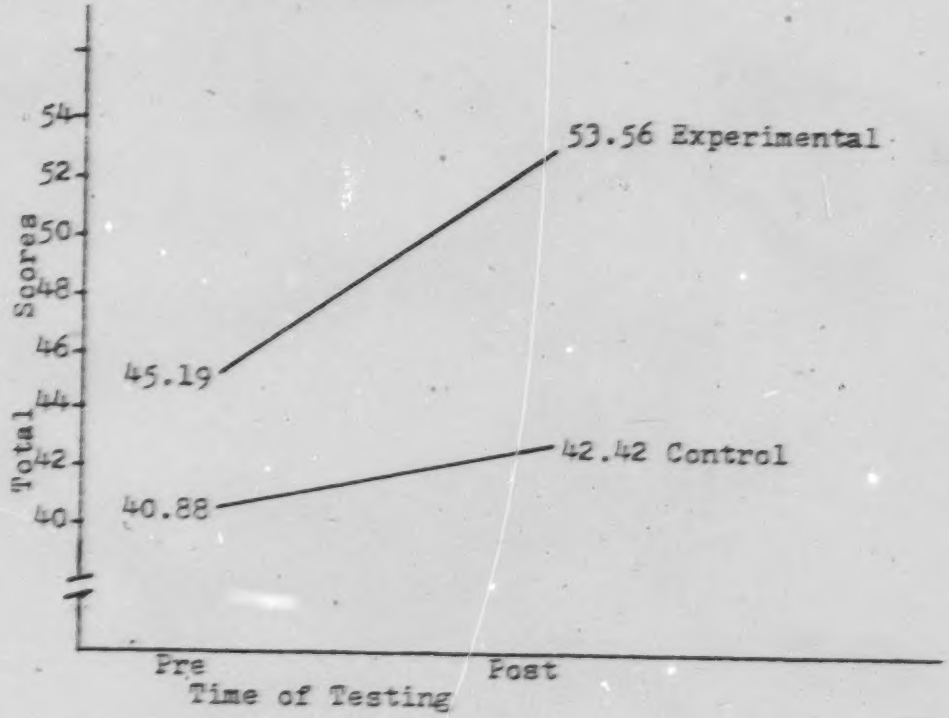

Table 4

ANALYSIS OF VARIANCE SUMMARY: FLORIDA KEY SCALE TOTAL SCORES

Source	df	MS	F
Between			
B - Groups	1	6314.88	14.09***
Error	237	448.05	
Within			
A - Pre vs Post	1	4434.88	37.09***
A x B	1	1213.12	10.15**
B x subj. w. grps.	237	119.56	

**p < .01 ***p << .001

treatment mean difference as large as that obtained between Checkpoint and control children on the Florida Key Scale (total scores) would occur by chance less than one time in 1000. It could, therefore, be concluded from the analysis of the data that Null Hypothesis 2 may be rejected.

The third null hypothesis reads:

> H_o 3: There is no statistically significant difference when the change in mean scores on the Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself) between a pre- and post- assessments of children participating in the program is compared to the change in mean scores of children in the control group.

Total scores on the Piers-Harris Children's Self Concept Scale were obtained for each subject by methods described in Chapter III. These scores served as the single dependent variable in the two-factor repeated measurements analysis of variance design. Analysis of variance of Piers-Harris Children's Self Concept Scale total scores indicated that the two main effects were found to be statistically significant. The interaction effect, however, was not statistically significant. Figure 4 depicts the interaction effect. Actual treatment means for each level of each effect appear on the graph to aid the interpretation of the results. The change for the control group from the pretest to posttest was somewhat less than the change for the experimental group. The fact that these lines are not quite parallel may be primarily a function of sampling error and errors of measurement of the scale itself. As

Figure 4

PRE AND POST TEST MEAN PIERS-HARRIS CHILDREN'S SELF CONCEPT SCALE TOTAL SCORES

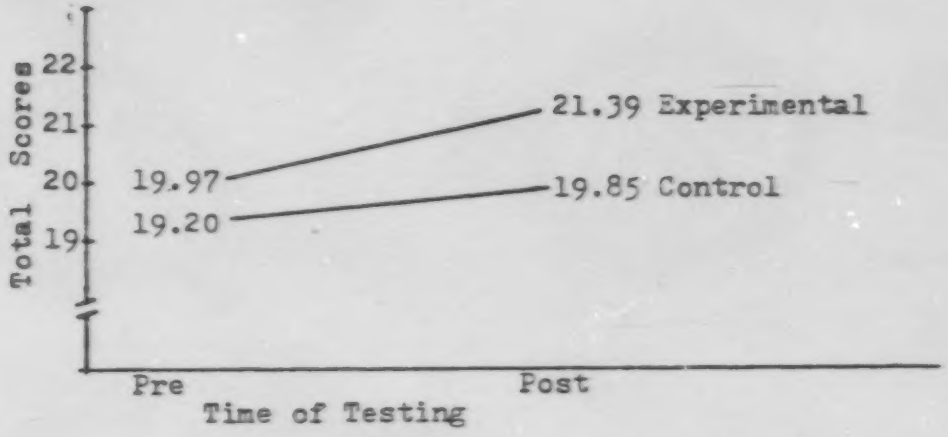

Table 5

ANALYSIS OF VARIANCE SUMMARY: PIERS-HARRIS CHILDREN'S SELF CONCEPT SCALE TOTAL SCORES

Source	df	MS	F
Between			
B - Groups	1	143.00	5.80 *
Error	237	24.63	
Within			
A - Pre vs Post	1	161.63	11.28 ***
A x B	1	15.94	1.11 n.s.
B x subj. w. grps.	237	14.33	

*p < .05 ***p < .001

indicated in Table 5, the repeated measurements main effect (Pretest versus Posttest), without regard for treatment groups, was found to be statistically significant ($F=11.28$; $df=1/237$, $p < .001$). The obtained difference between means for pretest versus posttest, without regard to treatment group, could be expected to occur by chance less than one in 1000. The main effect for Groups (Checkpoint versus control children), without regard to Time of Testing, was found to be statistically significant ($F=5.80$; $df=1/237$, $p < .05$). That is to say, the probability of an overall treatment mean difference as large as that obtained between Checkpoint children and control children on the Piers-Harris Children's Self Concept Scale (total scores) would occur by chance less than five times in 100. It could, therefore, be concluded from analysis of the data that Null Hypothesis 3 may be rejected.

Post-Hoc Analyses

Although the Checkpoint Project was committed to providing individualized instruction in an atmosphere which was warm and inviting, there was no guarantee that true individualization took place in all 100 centers at all times. Obviously, allowances for experience, commitment and natural talents of the center staffs were necessary. For the purposes of this study, it was decided to assess the degree of individualization taking place and the quality of atmosphere in the experimental centers. A scale, which is included

in Appendix C, was developed. Each experimental center was visited unannounced by two different observers (teachers on special assignment) on at least two different occasions. The observations took place during the span of the 50 days of the study. Each observer independently completed and submitted the observation forms at the conclusion of the visits. Table 6 indicates scores posted for each experimental center during the visits. The Pearson product-moment correlation coefficient between the scores of the two independent observers was .74. This value may be considered as an estimate of the inter-rater reliability for the scale. Based upon the information provided by the observers, it became possible to divide the experimental group into two sub groups. Part of the total experimental group was designated as "Experimental-High Individualization" (Exp-Hi) and part was designated "Experimental-Low Individualization" (Exp-Low).

Fink (36), Bledsoe (7) and Shaw, Edson and Bell (100) found that the relationship between lower self concept and low achievement was stronger among boys than girls. Although there was no specific attempt to develop a study design to explore this relationship alone, it was possible to draw information from available data that could reveal differences in the effect of Checkpoint on boys and on girls. Therefore, in the data, which is graphically presented in Figures 5, 6 and 7 and in the analyses presented in Tables 7, 8 and 9, the factors of Sex and Groups (Exp-

Table 6

OBSERVABLE INDIVIDUALIZED INSTRUCTION
AND CENTER ATMOSPHERE
BY EXPERIMENTAL SCHOOLS UNITS

Schools (By Identification No.)	Total Scores for Individualized Instruction and Atmosphere		Average (Max.=72)
	Observer A	Observer B	
27	71	72	71.5*
34	69	68	68.5*
36	69	64	66.5*
23	67	63	65 *
35	70	56	63 *
42	66	60	63 *
41	69	54	61.5*
31	67	55	61 *
47	71	47	59 *
38	48	45	46.5**
22	62	29	45.5**
32	57	27	42 **
33	40	40	40 **
43	46	29	37.5**

* Experimental-High (Exp -Hi)
** Experimental-Low (Exp -Low)

Hi, Exp-Low, Control) were explored. The analyses were carried out to assess the differential effects of "degree of individualization", if any, on boys and girls involved in the investigation. The analysis of variance procedure using three factors, Group, Sex and Time of Testing, was deemed appropriate to gauge the impact of group membership on boys and girls.

The analysis of variance, using the Self Appraisal Scale (SAS) total scores as the dependent variable, resulted in a statistically significant Groups by Time of Testing interaction effect (Exp-Hi vs. Exp-Low vs. Control without regard to Sex). The main effect for Groups (Exp-Hi vs. Exp-Low vs. Control without regard to Time of Testing and Sex) was also found to be statistically significant. No other effects were found to be significant. Because of the statistical significance of the interaction effect, the main effect cannot be interpreted directly..

To aid in the interpretation of the results, the mean total scores for boys and girls within each experimental group are displayed in Figure 5. As can be seen from the graph, the effect of group membership appears to account, in part, for the amount of change in SAS total scores. Group membership does not appear to effect boys and girls differently. What becomes most apparent from the data displayed in Figure 5 is that the change from pretest to posttest for all control group children was negative whereas the change for most experimental group

Figure 5

PRE AND POST MEAN SELF APPRAISAL SCALE TOTAL SCORES BY SEX, EXP-HI, EXP-LOW AND CONTROL

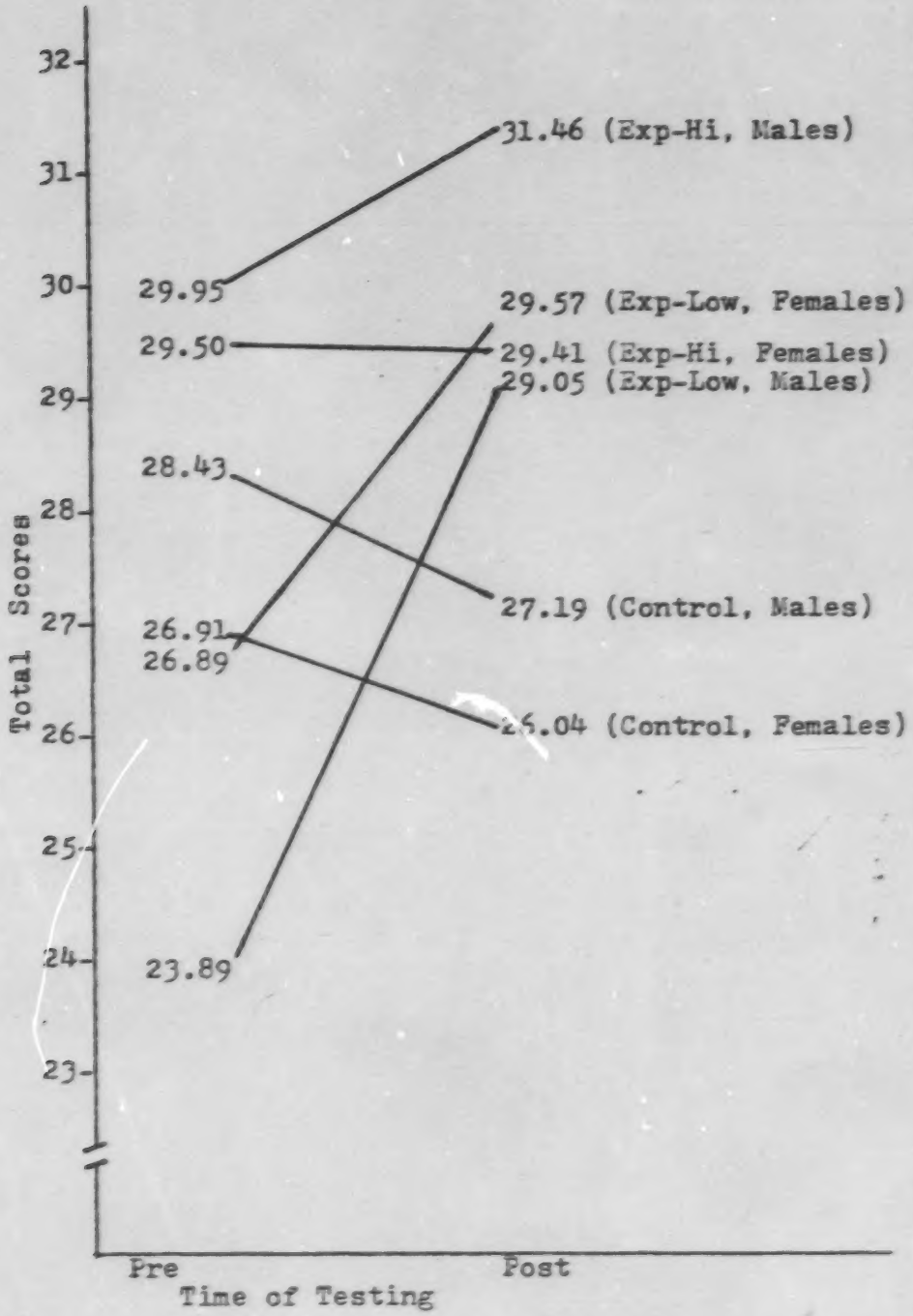

Table 7

ANALYSIS OF VARIANCE: SELF APPRAISAL SCALE TOTAL SCORES BY SEX, EXP-HI, EXP-LOW AND CONTROL

Source	df	MS	F
Between			
C-Groups	2	533.44	9.40 ***
B-Sex	1	25.06	< 1 n.s.
B x C	2	91.28	1.61 n.s.
Error	233	56.78	
Within			
A-Pre vs Post	1	126.50	3.47 n.s.
A x C	2	242.94	6.66 **
A x B	1	24.31	< 1 n.s.
A x B x C	2	21.97	< 1 n.s.
C x subj. w. grps.	233	36.48	

**p << .01 ***p << .001

children was positive. Although the amount of change appears to be much greater for boys and girls in one experimental group (Exp-Low), it may possibly be an artifact of the graphical presentation. The amount of change may also be due to the attainment of the lower mean scores at the pretest which may have provided more room for improvement.

The fact that the main effect for groups was statistically significant is not surprising. This result was obtained in the primary analysis for the SAS reported earlier in this Chapter. As can be seen in Table 7, neither the main effect for Sex nor any interaction containing that effect approached statistical significance. The expectation of boys and girls reacting differently to the Checkpoint Program "treatment" was not borne out.

Total scores from the Florida Key Scale (FKS) were analyzed using the same three factor analysis of variance design (Groups by Sex by Time of Testing). The Time of Testing was the repeated measurements factor and the total FKS score served as the single dependent variable.

The Groups by Time of Testing interaction was found to be statistically significant (Exp-Hi vss Exp-Low vs. Control without regard to Sex). As expected, the main effects for Groups and Time of Testing were also found to be statistically significant. More importantly, however, was the significant main effect for Sex. All of the experimental design effects can be understood more clearly by viewing Figure 6. The analysis of variance

Figure 6

PRE AND POST MEAN FLORIDA KEY SCALE TOTAL SCORES BY SEX, EXP-HI, EXP-LOW AND CONTROL

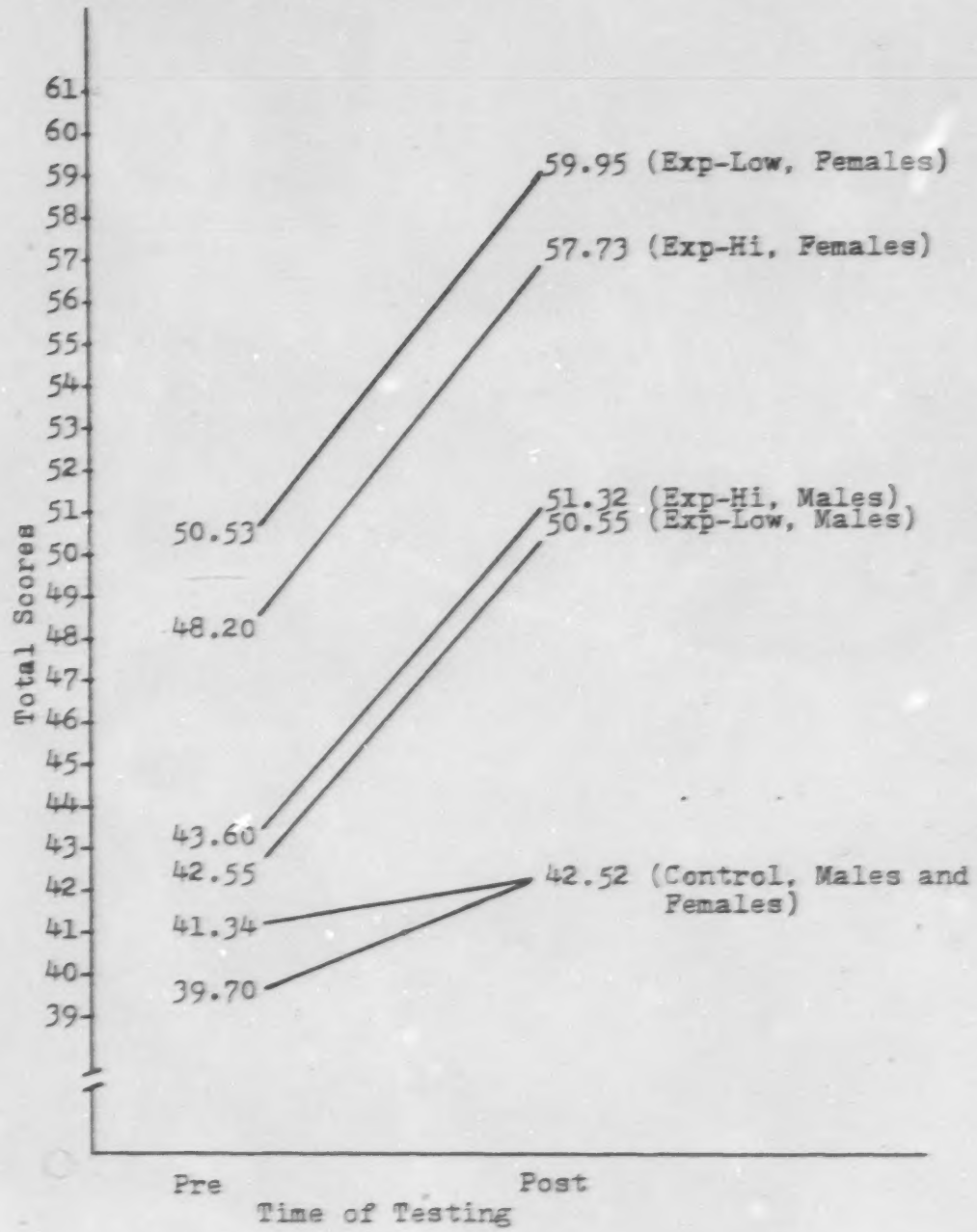

Table 8

ANALYSIS OF VARIANCE SUMMARY: FLORIDA KEY SCALE TOTAL SCORES BY SEX, EXP-HI, EXP-LOW AND CONTROL

Source	df	MS	F
Between			
C-Groups	2	3160.06	7.16 **
B-Sex	1	2244.44	5.08 *
B x C	2	516.78	1.17 n.s.
Error	233	441.65	
Within			
A-Pre vs Post	1	4435.13	36.56 ***
A x C	2	606.94	5.00 **
A x B	1	105.56	< 1 n.s.
A x B x C	2	16.28	< 1 n.s.
C x subj. w. grps.	233	121.31	

*p < .05 **p < .01 ***p << .001

summary table for this analysis appears in Table 8.

Gains in self concept scores as measured by the PKS were made by all groups. But, as can be seen in Figure 6, the gains made by girls in both experimental groups were much greater than for boys in the same groups and for all control group children. The Florida Key Scale may be more sensitive to differences in self concept that are sex related than is the Self Appraisal Scale. In addition, an examination of the data displayed in Figure 6 reveals that the notion that a higher degree of individualization yields positive and greater changes in self concept is not supported.

The final post-hoc analysis was a three-factor analysis of variance using total scores from the Piers-Harris Children's Self Concept Scale. The three factors were Groups, Sex and Time of Testing. The last factor was the repeated measurements factor. A plot of the treatment means for all groups appears in Figure 7. The summary table for this analysis of variance appears in Table 9.

Although the figure appears to present "mixed" results, only two main effects, the Group effect and the Time of Testing effect, were found to be statistically significant. The main effect for Sex did not approach statistical significance.

Figure 7

PRE AND POST MEAN PIERS-HARRIS CHILDREN'S SELF CONCEPT SCALE TOTAL SCORES BY SEX, EXP-HI, EXP-LOW AND CONTROL

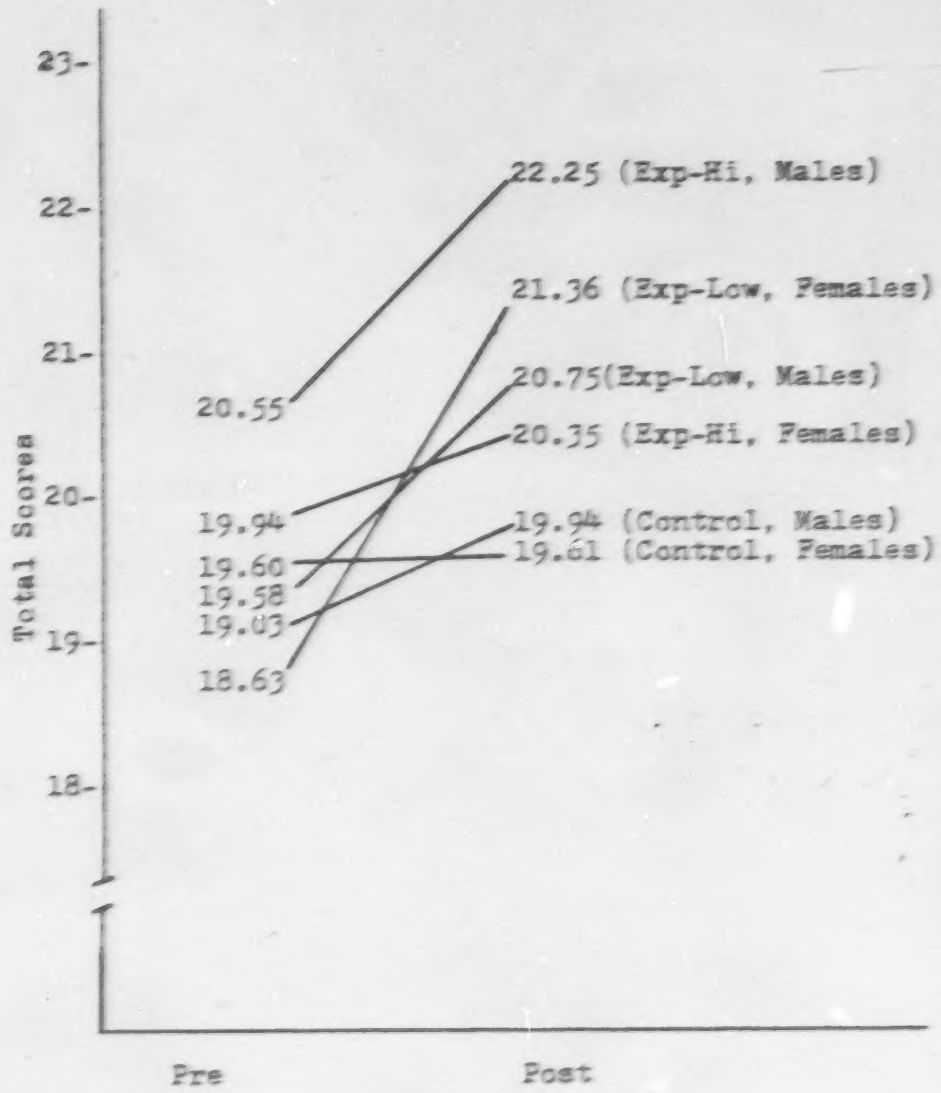

Table 9

ANALYSIS OF VARIANCE SUMMARY: PIERS-HARRIS CHILDREN'S SELF CONCEPT SCALE TOTAL SCORES BY SEX, EXP-HI, EXP-LOW AND CONTROL

Source	df	MS	F	
Between				
C-Groups	2	99.00	4.04	*
B-Sex	1	25.88	1.06	n.s.
B x C	2	23.34	1	n.s.
Error	233	24.51		
Within				
A-Pre vs Post	1	161.56	11.23	***
A x C	2	9.63	< 1	n.s.
A x B	1	4.88	< 1	n.s.
A x B x C	2	18.06	1.26	n.s.
C x subj. w. grps.	233	14.38		

*p < .05 ***p < .001

CHAPTER V

DISCUSSION

Summary and Conclusions

The central issue in this study was to determine whether a measurable positive change in self concept occurred among low achieving primary grade urban children as a result of exposure to the Philadelphia Checkpoint Program. Using three independent assessment instruments, the results indicated that positive changes in self concept of children participating in the Checkpoint Program were greater, on all three measures, than changes experienced by control group children during a ten week treatment period. Further, when comparing the relative changes in self concept of the children in the Checkpoint Program with those of the control group, the differences were found to be statistically significant. Therefore, the findings of this study indicate that self concept, as measured by the Self Appraisal Scale, the Florida Key Scale and the Piers-Harris Children's Self Concept Scale, among low achieving primary grade urban children can be raised as a result of exposure to an individualized instructional atmosphere such as that found in the Checkpoint Program. Although the program was not primarily designed to improve the self concept of children, it may

be further concluded that an educational process that includes a warm, accepting, "can't fail" atmosphere can be effective in creating positive changes in the self concept of participating children.

An important question to which no clear answer was provided by the results of this study is the cause and effect relationship between academic growth and improvement in self concept. The results clearly show that progress in both academic achievement (reading) and self concept took place within the experimental group. If, during the relatively short exposure to the program, gains in self concept preceded measurable academic gains, then a conclusion relative to this antecedent relationship may have been possible. At this point, however, the only conclusion that can be drawn is that gains in both self concept and reading skills took place. However, the cause- and-effect relationship between these findings cannot be ascertained from the data.

A number of studies concerned with programs that incorporate some of the elements of Checkpoint reported progress in both academic achievement and in self concept (50), (87), (88), (101). In these studies, conclusions were based primarily upon observation and opinion. One of the basic reasons for conducting this study was to verify or reject the notion that specialized programs providing individualized instruction for low achieving children do, in fact, produce measurable gains in self concept.

From the results of this study, it is possible to conclude that programs similar in structure to Checkpoint may have produced a combination of positive measurable results in academic achievement and self concept.

Checkpoint means many things and involves many concepts. Some of the elements are: emphasis on individual prescriptive and diagnostic instruction, "cycling" children out of regular classrooms, immediate response, guaranteed success in a "can't fail" atmosphere and most importantly, warm and personal adult attention. The results of this study can not be used to conclude which specific aspects of the Checkpoint Program impact upon self concept. It may be one element, a combination of elements or the total conglomerate that may effect change in self concept.

Coopersmith (24:21) has stated that it is difficult to effect rapid changes in self concept. Engle (31) wrote that self attitudes of adolescents tend to remain stable while Piers (75:18) stated that stability may be less in early childhood. Snygg and Combs (20:161) wrote that change in self concept could come with dramatic suddenness. It may be concluded from the results of this study that change in self concept, according to measures used, can take place during a brief exposure to an educational process. This relatively rapid change may be associated with the age of the subjects. An appropriate "follow-up" to this study would be to measure self concept changes

resulting from exposure to the Checkpoint Program over a period of years. Myers (65) discovered that continuous exposure to an individualized program over two years induced a decline in self concept. However, a provision for a continued warm atmosphere associated with long exposure to individualized instruction may produce findings that could vary from those of Myers.

Post-hoc analyses were conducted for two major reasons. The first was related to the fact that this investigator discovered through observations that although all or most Checkpoint teachers adhered to program policies, there were sufficient differences within the teaching situation that provided the teacher with a great deal of latitude. As described in Chapter IV and summarized in Table 6, it was possible, through the use of observer reports, to identify those centers with a comparatively high degree (Exp-Hi) and those with a relatively low degree (Exp-Low) of individualization. An examination of Figures 5, 6 and 7 and the related data reveals that it is not really possible to conclude that the Exp-Hi group made better gains in self concept than the Exp-Low. Both the Exp-Hi and Exp-Low groups appeared to make greater measurable self concept gains than the control group. From this information, it may be concluded that the degree of individualization may not be an extremely critical aspect in the development of self concept. The critical difference appeared

when Checkpoint participation was compared with no Checkpoint exposure.

The second reason for conducting the post-hoc analyses was related to the idea that the relationship between lower self concept and low achievement is stronger among boys than girls (7), (36), (100). An examination of the results indicated that on only one of the three measures, the Florida Key Scale, was a change in self concept related to exposure to Checkpoint significantly different when comparing boys and girls. Based upon this finding, it must be concluded that the results of this study failed to give clear support to the notion that the sex factor is critically associated with changes in self concept resulting from an individualized educational process.

Implications

The findings of this study can be of considerable importance to educators and curriculum developers. During a period of time in which very large amounts of resources are being expended to ascertain which of many approaches may be best to reach many low achieving urban children, Checkpoint and similar ideas hold a ray of hope. As reported in Chapter IV, third grade children in the study who were low achieving and not exposed to Checkpoint or any other special program actually dropped in national percentile rankings from the 13th to the 6th in CAT

Reading between May, 1974 and December, 1974. This drop at the third grade level is not strange to those who serve in large urban school districts. Coleman (17:293), in his well publicized report, Equality of Educational Opportunity, referred to this decline from grade 3 to grade 12. Intervention with some type of supplementary program such as Checkpoint appears to be of extreme importance. Programs like Checkpoint may be able to correct what appears to be the normal cumulative deficit of underachievement of many urban children which becomes very evident at the third grade level and continues beyond. The problem of which is antecedent, self concept or academic growth, is not the paramount issue. The real hope is that programs and practices will be designed to develop and nourish growth in both self concept and academic achievement simultaneously or in any order.

Recommendations

The findings of this and numerous other studies support the assumption that there is an interrelationship between self concept and academic achievement (5), (10), (11), (13), (14), (17), (29), (42), (55), (58), (68), (71), (79), (99), (109). Studies should continue to be conducted which attempt to discover if there is a definite cause and effect relationship between self concept and academic achievement. If and when conclusive evidence becomes available about the antecedent relationship, then curriculum

developers should be guided accordingly. However, since this antecedent relationship is not clearly established at this time, curricula should be developed that deliberately attempts to improve self concept and academic achievement at the same time with little or no attention directed to the cause and effect relationship. In the last analysis, if schools can affect academic growth, which is their major responsibility, through the use of the catalyst of positive self concept, then the expenditure of resources to concentrate on the improvement of self concept is justified even though the relationship is not clearly understood.

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*SELF APPRAISAL SCALE

Helen Davidson
Judith Greenberg
University of New York

NAME:_____

Directions: The words on this page tell different ways children are. Read the words next to each number. Put a cross (X) in one space on each line to show whether you think you are that way MOST OF THE TIME or ABOUT HALF THE TIME or HARDLY EVER.

I THINK I AM:	Most of the Time	About Half the Time	Hardly Ever
1. neat	2**	1	0
2. a big help at home	2	1	0
3. smart in school	2	1	0
4. shy	0	1	2
5. a pest	0	1	2
6. very good in art	2	1	0
7. scared to take chances	0	1	2
8. full of fun	2	1	0
9. a hard worker	2	1	0
10. polite	2	1	0
11. trying my best	2	1	0
12. nice looking	2	1	0
13. lazy	0	1	2
14. full of questions about new things	2	1	0
15. going to do well	2	1	0
16. sad	0	1	2
17. good in sports	2	1	0
18. careless	0	1	2
19. honest	2	1	0
20. nervous	0	1	2
21. good at making things	2	1	0
22. bad	0	1	2
23. liked by other children	2	1	0
24. as lucky as others	2	1	0

*Permission to use the Self-Appraisal Scale was obtained from Dr. Judith Greenberg, on September 9, 1974.

**Numbers represent score values.

Appendix B

*THE FLORIDA KEY
LEARNER SELF-CONCEPT SCALE

Dr. William W. Purkey
Dr. Bob N. Cage
University of Florida

TEACHER FORM

This scale is to assist the teacher in evaluating how the student perceives his or her "learner" self. Please select one of the following answers and record the number in the blank space.

_____
Name of student to be evaluated

NEVER:0	VERY SELDOM:1	ONCE IN AWHILE:2	OCCASION-ALLY:3	FAIRLY OFTEN:4	VERY OFTEN:5

Compared with other students his age, does this student:

1. ask meaningful questions in class?....._____
2. say good things about his school?....._____
3. talk to others about his school work?....._____
4. get along with other students?....._____
5. get along with the teacher?....._____
6. finish his school work?....._____
7. read in class?....._____
8. join in school activities?....._____
9. speak up for his own ideas?....._____
10. look people in the eye?....._____
11. keep calm when things go wrong?....._____
12. offer to answer questions in class?....._____
13. offer to speak in front of the class?....._____
14. offer to do extra work in school?....._____
15. tell the truth about his school work?....._____
16. seek out new things to do in school on his own?....._____
17. do his school work carefully?....._____
18. pay attention to class activities?....._____

*Permission to use The Florida Key Scale was obtained from Dr, W. Purkey on July 22, 1974.

Appendix C

CHECKPOINT CENTER PROGRAM
Observable Individualized Instruction and
Center Atmosphere

Center Location_____ Date_____

Individualizing instruction consists of designing and conducting a program of studies with each student that is tailor-made to fit his learning needs and his characteristics as a learner. This checklist is designed to assess the degree of individualization taking place and quality of atmosphere observable during a Checkpoint class session.

****

Please select one of the following responses and record the number in the blank space next to each item.

Not Evident or Not Observable:0	Barely Evident:1	Moderately Evident:2	Evident:3	Very Evident:4

Classroom Atmosphere:

1. The room is attractive, neat and inviting.....____
2. The teaching-learning atmosphere appears to be structured but relaxed.....____
3. Each pupil appears to be treated as a unique individual.....____
4. Personal contact (verbal and/or physical takes place between an adult (teacher or aide) and each child.....____
5. The teacher appears to be warm and pleasant.....____
6. The instructional aide appears to be warm and pleasant.....____

Total Atmosphere ____

Individualized Instruction:

1. The classroom is well organized and efficiently managed....._____
2. Up to date record folders are kept for each child....._____
3. Materials and equipment necessary for individualized instruction are excessible and available in adequate quantities....._____
4. Lesson planning is done for individual students rather than for a group....._____
5. The curriculum for each child is directly based upon the specific learning objectives established for the youngsters....._____
6. There is evidence that varying instructional techniques are used with <u>each</u> child...._____
7. Different learning tasks are assigned to different class members at a given time....._____
8. Help is offered to students individually rather than in a group setting....._____
9. Each student appears to be proceeding at his own rate through a unit of study....._____
10. Students appear to be conducting a major part of their learning on a self-directed basis....._____
11. Group teaching, when it occurs, is based upon the determination that each student is ready to study the same task and in the same way as other members of the group....._____
12. Evaluation of pupil progress appears to be done on an individual basis....._____

INDIVIDUALIZED INSTRUCTION TOTAL _____

GRAND TOTAL _____